

Commonwealth of Kentucky
Division for Air Quality
PERMIT STATEMENT OF BASIS

Conditional Major No. F-03-020
TRIM MASTERS INCORPORATED
1051 WITHROW COURT, BARDSTOWN, KY
June 14, 2004
BRIAN BALLARD, REVIEWER
Plant I.D. # 021-179-00044
Application Log # 55807

SOURCE DESCRIPTION:

The Trim Masters, Inc. (TMI) manufacturing operation in Bardstown, Kentucky produces trimmed automobile door panels. The facility operations include substrate preparation, vacuum forming, edge folding, ornament attachment, accessories, and final assembly. The door panel can be made from either a single pressed wood mat, an injection molded plastic part, or a combination injection molded plastic/wood mat. Substrate presses and injection molding machines are used in the substrate preparation process. Vacuum forming is the process of bonding a vinyl layer to the face of the substrate with adhesive. Edge folding is the process of crimping and adhering the overlapped vinyl, which was applied to the front surface of the door panel in the vacuum forming process. Ornament attachment is the process of attaching a decorative fabric or leather ornament to the door panel. Door and seat accessory parts are produced by injection molding. The final door panel is fully assembled by mechanically attaching the various components produced in upstream processes. The source previously applied for a Title V Permit but on June 9, 2003 applied for a Conditional Major Permit as a result of a change in formulation to low-HAP adhesives used at the facility and an elimination of adhesive usage in some operations. The Conditional Major Permit will cover the addition of the Solara Lower Panel Assembly and PACCAR Edge/Fold Processes. Other new construction covered by the Conditional Major Permit includes; Two (2) Polypropylene Silos, Two (2) 1,550-Ton Injection Molding Machines, One Kenaf Press, and Laser Cutting Process.

COMMENTS:

Potential to emit (PTE) estimates for emission points # 1, #2, #4, #5, #6, #7, #8, #9 and #10 are based on maximum throughput estimates considering process bottlenecks and not on the rated capacity of the applicator in the spray booth(s) at these emission points. Process bottlenecks are attributed to mechanical limitations of the vacuum former machines and injection molding machines that are associated with these emission points. The vacuum former bottleneck is stated as being a 30-second vinyl heating time, and 22 second mechanical load, unload, and material transfer time. Similarly, the injection molding bottleneck is stated as being a 30 second cool-down time and 30 seconds of mechanical load, unload, and material transfer time.

In the draft permit emission limitations for formaldehyde were specified for emission points 1, 3 and 4 in Section B of the permit and source wide limitations for formaldehyde were specified in Section D of the permit. Emission Point 3, Substrate Presses #1 and #2 accounted for 97 percent of the formaldehyde emissions from this source based on the initial application submitted June 9, 2003. This application referenced a stack test formaldehyde emission factor determined at a similar facility on nearly identical equipment.

The emission of toxics from the source was modeled using the ISCST3 modeling program. Concentration of formaldehyde was determined to exceed the acceptable concentration established by Region 9 preliminary remediation goals (PRGs) for the concentration of formaldehyde in ambient air. An hourly emission limit for formaldehyde was specified in the draft permit based on the ISCST3 modeling data and the acceptable concentration for formaldehyde established by the Region PRG table for formaldehyde in ambient air.

Trim Masters Inc. proceeded to have an analysis (stack test) done of the emissions of formaldehyde from Substrate Presses #1 and #2. This analysis was observed and approved by the Division for Air Quality. The results of the analysis showed that the emission rate of formaldehyde from Substrate Presses #1 and #2 was significantly lower than the emission rate specified in the initial application submitted June 9, 2003. The emission rate was also significantly lower than the hourly emission limit specified in the draft permit. Trim Masters Inc. requested that the emission limit and all accompanying monitoring and recordkeeping of hourly formaldehyde emissions be removed from the permit. The Division for Air Quality approved this request and changed the permit accordingly.

The descriptions for emission points 9 and 10 were updated to include the ovens associated with these processes.

Since no restrictions on hours of operation or types of adhesives is specified in the permit, it is determined by the Division that no additional language is necessary to clarify this. Compliance with Conditional Major Limitations and 401 KAR 63:020 is solely based emissions of VOC and HAP, not on any specific material.

APPLICABLE REGULATIONS:

401 KAR 63:060 - List of hazardous air pollutants, petition process, lesser quantity designations, and source category list.

401 KAR 63:020 - Potentially Hazardous Matter or Toxic Substances, applies to the potentially hazardous matter and toxic substance emissions from affected facilities.

401 KAR 59:010 - Particulate Matter, applies to the particulate matter emissions from affected facilities constructed on or after July 2, 1975.

EMISSION AND OPERATING CAPS DESCRIPTION:

Trim Masters, Inc. has requested voluntary permit limits of less than 90.0 tons per year of volatile organic compounds (VOC), 9.0 tons per year of individual hazardous air pollutants (HAP) and 22.5 tons per year of combined HAPs.

PERIODIC RECORDKEEPING:

The permittee shall maintain monthly records of the purchase and usage of the adhesives, hardeners, and cleaning solvents or any other HAP/VOC containing material. HAP/VOC emissions shall be calculated and recorded on a *monthly* basis. These records shall be summarized in tons per month HAP/VOC emissions; subsequently, tons of HAP/VOC emissions per 12-month period shall be recorded. This 12-month period shall be based on a 12-month rolling total representing the most recent year. In addition, these records shall comply with HAP/VOC emission limitations listed herein for the conditional major limitations. These records, as well as purchase orders and invoices for all HAP/VOC containing materials, shall be maintained on site for a period of five years from the date the data was collected and shall be provided to the Division upon request.

OPERATIONAL FLEXIBILITY: NA**CREDIBLE EVIDENCE:**

This permit contains provisions which require that specific test methods, monitoring or recordkeeping be used as a demonstration of compliance with permit limits. On February 24, 1997, the U.S. EPA promulgated revisions to the following federal regulations: 40 CFR Part 51, Sec. 51.212; 40 CFR Part 52, Sec. 52.12; 40 CFR Part 52, Sec. 52.30; 40 CFR Part 60, Sec. 60.11 and 40 CFR Part 61, Sec. 61.12, that allow the use of credible evidence to establish compliance with applicable requirements. At the issuance of this permit, Kentucky has not incorporated these provisions in its air quality regulations.